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Banisteria, Number 26, 2005

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EARLY TERRESTRIAL EMERGENCE OF A HATCHLING NORTHERN DIAMOND-BACKED TERRAPIN (*MALACLEMYS TERRAPIN TERRAPIN*) ON THE EASTERN SHORE OF VIRGINIA -- Most of the information available on nest emergence and overwintering of hatchling *Malaclemys t. terrapin* in the mid-Atlantic region suggests that they emerge from the nest in late summer of the same year in which the eggs were deposited (Ernst et al., 1994; Mitchell, 1994). Willem Roosenburg, Russell Burke, Scott Smith, and Paula Henry (pers. comm., April 2005) noted that all of the hatchlings in nests they have observed in Maryland and on Long Island, New York, hatched in the year they were produced. The only published summer nest emergence date in Virginia is 27 August (B. Truitt, in Mitchell, 1994). Several other turtles in Virginia have been documented to overwinter in the nest and emerge the following spring (Mitchell, 1994). Here we report an observation of late winter activity of a hatchling Northern Diamond-backed Terrapin on Virginia's Eastern Shore that suggests overwintering in the nest.

At approximately 1000 h EST on 22 March 2005, one of us (PD) found an active hatchling *M. t. terrapin* (Fig. 1) walking along the beach access road on Fisherman Island, Eastern Shore of Virginia/Fisherman Island National Wildlife Refuge, Northampton County, Virginia (37° 05' 52.17" N, 75° 58' 30.82" W). The turtle lacked any growth marks on the carapacial scutes supporting our identification of a hatchling stage (Fig. 1). The weather was sunny that day with a high of 10° C (at time of capture) and a low for the previous night of 0° C. Rain in the previous 24 h was 0.25 cm. PD first saw the turtle's tracks and followed them to the hatchling. No other turtles were seen despite additional searching. Nesting females use this area regularly.



Fig. 1. Hatchling *Malaclemys terrapin terrapin* found on Fisherman Island, Virginia on 22 March 2005.

This observation represents either a late-winter emergence of a hatchling that overwintered in the nest or the emergence of a hatchling that entered a terrestrial overwintering site after emergence from the nest the previous August or September. Either may be correct because Lawler & Musick (1972) described a juvenile with two lines of arrested growth that was overwintering in a dune 0.3 m below the surface in Gloucester County, Virginia. It was found on 7 November 1967, reburied, and emerged naturally on 23 April 1968. Terrapins raised in artificial impoundments in coastal North Carolina at the turn of the 20th century emerged from terrestrial hibernation in March and April (Coker, 1906). The emergence from a terrestrial overwintering site and activity by this hatchling in late March is also significant because it indicates that these small turtles can initiate activity in cool weather. *Malaclemys t. terrapin* is understudied in the Virginia portion of its range. Additional cool weather observations may reveal other unknown aspects of the behavior and ecology of this species.

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- WINTER ACTIVITY BY AN EASTERN BOX TURTLE (*TERRAPENE CAROLINA CAROLINA*) IN VIRGINIA -- Lepidosaurian reptiles and turtles normally limit activity in cold weather because they are ectothermic. These animals are usually dormant during winter months in the Northern Hemisphere, but several reports, including some from Virginia, demonstrate that reptiles may be active during cold periods. Mitchell (1994) summarized cold-weather observations on Virginia reptiles published prior to that date. Winter-active reptiles that have been reported since then include an Eastern Wormsnake (*Carphophis amoenus*) by Mitchell & Kirk (1996), a Northern Black Racer (*Coluber constrictor*) by Church & Mitchell (2003), and Eastern Ratsnakes (*Elaphe [obsoleta] alleghaniensis*) by Bulmer & Cherok (1998).
- Turtles basking on logs in lakes and ponds are frequently observed on sunny days in the Virginia Coastal Plain when winter temperatures are about 10-16° C (Mitchell, 1994, unpublished). Terrestrial winter activity is far less common for turtles. Mitchell (1994) and Boucher (1999) noted that all activity records known for *Terrapene carolina* in Virginia were from March to December. Drotos (1974) listed an activity period for this species of 5 May to 31 October in Prince William Forest Park in Prince William County. Hunley (1998) reported an Eastern Box Turtle (*T. c. carolina*) active on a college lawn in Roanoke at an air temperature of 10° C on 8 February 1998. This terrestrial turtle becomes inactive during winter months by burying completely or partially under leaf litter and to depths of several cm in the ground (Ernst et al., 1994; Mitchell, 1994; Dodd, 2001). The record depth of 48 cm was in Illinois (Cahn, 1937). In northern states, box turtles can withstand freezing of nearly 58% of their extracellular body fluids for up to 4 days and still recover (Costanzo & Claussen, 1990). Observations of active box turtles at cold temperatures are of interest because they show the range of environmental conditions within which these reptiles may be active in winter. This note describes a turtle found completely exposed at freezing temperatures in southeastern Virginia.
- On 11 February 2005, I observed an adult male *T. c. carolina* sitting in the open on the ground with head and limbs partially retracted into its shell at 1045 h EST at a site about 5.0 km NNE Rushmere, Isle of Wight County, Virginia (37° 06' 37.29" N, 76° 39' 56.64" W).